AMENDMENTS TO THE CLAIMS

1. (**Previously Presented**) A nucleic acid molecule encoding a fusion polypeptide useful as a vaccine composition, which molecule comprises:

(a) a first nucleic acid sequence encoding a first polypeptide or peptide that promotes processing via the MHC class I pathway,
wherein the first polypeptide or peptide is by SEQ ID NO:9 or by nucleotides 10633-12510 of the *Mycobacterium tuberculosis* genome set forth in GENBANK Z95324 AL123456; or
(ii) SEQ ID NO:10; or
(iii) an active C-terminal domain of (i) or (ii);

(b) fused in frame with the first nucleic acid sequence, a second nucleic acid sequence encoding a signal peptide; and

(c) a third nucleic acid sequence that is linked in frame to said first nucleic acid sequence and that encodes an antigenic polypeptide or peptide which comprises an epitope that binds to a MHC class I protein which epitope is present on, or is cross-reactive with, an epitope of a pathogenic organism, cell, or virus.

2.-6. (**Canceled**)

7. (**Original**) The nucleic acid molecule of claim 6, wherein the virus is a human papilloma virus.

8. (**Original**) The nucleic acid molecule of claim 7, wherein the antigen is an E7 polypeptide of HPV-16 having the sequence SEQ ID NO : 2, or an antigenic fragment thereof.

9. (**Original**) The nucleic acid molecule of claim 8, wherein the HPV-16 E7 polypeptide is a non-oncogenic mutant or variant of said E7 polypeptide.

10. (**Currently Amended**) The non oncogenic mutant of claim 9 wherein the sequence of the E7 polypeptide differs from SEQ ID NO : 2 by one or more of the following substitutions:

(a) Cys at position 24 to Gly or Ala,

(b) Glu at position 26 to Gly or Ala, or

(c) Cys at position 91 to Gly or Ala.

11. (**Original**) The nucleic acid molecule of claim 7, wherein the antigen is the E6 polypeptide of HPV-16 having the sequence SEQ ID NO : 4 or an antigenic fragment thereof.

12. (**Original**) The nucleic acid molecule of claim 11, wherein the HPV-16 E6 polypeptide is a non-oncogenic mutant or variant of said E6 polypeptide.

13. (**Original**) The non oncogenic mutant of claim 12 wherein the sequence of the E6 polypeptide differs from SEQ ID NO : 4 by one or more of the following substitutions:

(a) Cys at position 70 to Gly or Ala

(b) Cys at position 113 to Gly or Ala.

(c) Ile at position 135 to Thr

14. (**Original**) The nucleic acid molecule of claim 1 that is characterized as pNGVL4a-Sig/E7 (detox) /HSP70, and has the sequence SEQ ID NO : 13.

15. (**Canceled**)

16. (**Previously Presented**) An expression vector comprising the nucleic acid molecule of claim 1 operatively linked to

(a) a promoter; and

(b) optionally, additional regulatory sequences that regulate expression of said nucleic acid in a eukaryotic cell.

17. (**Currently Amended**) An expression vector comprising the nucleic acid molecule of claim 14[[.]] operatively linked to

(a) a promoter ; and

(b) optionally, additional regulatory sequences that regulate expression of said nucleic acid in a eukaryotic cell.

18. **(Previously Presented)** The expression vector of claim 16 which comprises plasmid PNGVL4a.

19. **(Previously Presented)** The expression vector of claim 17 which comprises plasmid pNGVL4a.

20. **(Previously Presented)** A pharmaceutical composition capable of inducing or enhancing an antigen-specific immune response, comprising:

(a) pharmaceutically and immunologically acceptable excipient in combination with;

(b) the nucleic acid molecule of claim 1.

21. **(Original)** A pharmaceutical composition capable of inducing or enhancing an antigen- specific immune response, comprising:

(a) pharmaceutically and immunologically acceptable excipient in combination with;

(b) the nucleic acid molecule of claim 14.

22. **(Original)** A pharmaceutical composition capable of inducing or enhancing an antigen- specific immune response, comprising :

(a) pharmaceutically and immunologically acceptable excipient in combination with;

(b) the expression vector of claim 16.

23. **(Original)** A pharmaceutical composition capable of inducing or enhancing an antigen- specific immune response, comprising:

(a) pharmaceutically and immunologically acceptable excipient in combination with;

(b) the expression vector of claim 19.

24. **(Previously Presented)** A method of inducing or enhancing an antigen specific immune response in a subject comprising administering to the subject an effective amount of the pharmaceutical composition of claim 22, thereby inducing or enhancing said response.

25. (**Previously Presented**) A method of inducing or enhancing an antigen specific immune response in a subject comprising administering to the subject an effective amount of the pharmaceutical composition of claim 44, thereby inducing or enhancing said response.

26. (**Previously Presented**) A method of inducing or enhancing an antigen specific immune response in a subject comprising administering to the subject an effective amount of the pharmaceutical composition of claim 45, thereby inducing or enhancing said response.

27. (**Original**) A method of inducing or enhancing an antigen specific immune response in a subject comprising administering to the subject an effective amount of the pharmaceutical composition of claim 23, thereby inducing or enhancing said response.

28. (**Canceled**)

29. (**Original**) The method of claim 24 wherein said subject is a human.

30. (**Original**) The method of claim 25 wherein said subject is a human.

31. (**Original**) The method of claim 26 wherein said subject is a human.

32. (**Original**) The method of claim 27 wherein said subject is a human.

33. (**Currently Amended**) The method of claim 29 wherein said administering is by [[a]] an intramuscular injection by gene gun administration or by needle-free jet injection.

34. (**Currently Amended**) The method of claim 30 wherein said administering is by [[a]] an intramuscular injection by gene gun administration or by needle-free jet injection.

35. (**Currently Amended**) The method of claim 31 wherein said administering is by [[a]] an intramuscular injection by gene gun administration or by needle-free jet injection.

36. (**Currently Amended**) The method of claim 32 wherein said administering is by [[a]] an intramuscular injection by gene gun administration or by needle-free jet injection.

37. (**Previously Presented**) A method of inhibiting growth or preventing re-growth of a tumor expressing HPV E7 protein in a subject, comprising administering to said subject an effective amount of a pharmaceutical composition of claim 44, wherein said third nucleic acid sequence encodes one or more epitopes of E7, thereby inhibiting said growth or preventing said re-growth.

38. (**Previously Presented**) A method of inhibiting growth or preventing re-growth of a tumor expressing HPV E6 protein in a subject, comprising administering to said subject an effective amount of a pharmaceutical composition of claim 45, wherein said third nucleic acid sequence encodes one or more epitopes of E6, thereby inhibiting said growth or preventing said re-growth.

39. (**Canceled**)

40. (**Previously Presented**) A method of inhibiting growth or preventing re-growth of a tumor expressing HPV E7 protein in a subject, comprising administering to said subject an effective amount of a pharmaceutical composition of claim 23, wherein said third nucleic acid sequence encodes one or more epitopes of E7, thereby inhibiting said growth or preventing said re-growth.

41. (**Previously Presented**) An expression vector comprising the nucleic acid molecule of claim 13 operatively linked to

(a) a promoter; and

(b) optionally, additional regulatory sequences that regulate expression of said nucleic acid in a eukaryotic cell.

42. (**Previously Presented**) The expression vector of claim 41 which comprises plamid pNGVL4a.

43. (**Previously Presented**) A pharmaceutical composition capable of inducing or enhancing an antigen-specific immune response, comprising:

(a) pharmaceutically and immunologically acceptable excipient in combination with;

(b) the nucleic acid molecule of claim 13.

44. (**Previously Presented**) A pharmaceutical composition capable of inducing or enhancing an antigen-specific immune response, comprising:

(a) pharmaceutically and immunologically acceptable excipient in combination with;

(b) the expression vector of claim 17.

45. (**Previously Presented**) A pharmaceutical composition capable of inducing or enhancing an antigen-specific immune response, comprising:

(a) pharmaceutically and immunologically acceptable excipient in combination with;

(b) the expression vector of claim 41.